

Title (en)

Backlight unit and display apparatus having the same

Title (de)

Rückbeleuchtungseinheit und Anzeigevorrichtung damit

Title (fr)

Unité de rétroéclairage et appareil d'affichage doté de celle-ci

Publication

EP 2420883 A2 20120222 (EN)

Application

EP 11177450 A 20110812

Priority

- KR 20100079538 A 20100817
- KR 20100079539 A 20100817

Abstract (en)

A backlight unit includes a bottom frame (10) having a bottom surface (11) and a sidewall (12), a plurality of light emitting diodes (21), at least one module substrate (20) to support at least one light emitting diode and including a connector to supply external power to the light emitting diode, a reflective sheet (25), and an integrated light guide plate (30). A recess part (33) includes first, second and third surfaces (35a,35b,35c) and has a first layer with a first width (d1) to receive the module substrate and a second width (d2) to receive the light emitting diode. Openings (23) transfer light emission heat to the heat sink sheet (28). An optical sheet (40), which may include a first diffusion sheet (41), a prism sheet (42), and a second diffusion sheet (43), is on the light guide plate, a display panel (60) on the optical sheet, and a top frame (70) on the display panel. A fixing member (50) is formed on the optical sheet.

IPC 8 full level

G02F 1/13357 (2006.01); **G02B 6/00** (2006.01)

CPC (source: EP US)

G02B 6/0021 (2013.01 - EP US); **G02B 6/0031** (2013.01 - EP US); **G02B 6/0068** (2013.01 - EP US); **G02B 6/0073** (2013.01 - EP US); **G02B 6/0083** (2013.01 - EP US); **G02B 6/0085** (2013.01 - EP US); **G02F 1/133606** (2013.01 - EP US); **G02F 1/133603** (2013.01 - EP US); **G02F 1/133605** (2013.01 - EP US); **G02F 1/133607** (2021.01 - EP US); **G02F 1/133611** (2013.01 - EP US); **G02F 1/133612** (2021.01 - EP US); **G02F 1/133628** (2021.01 - EP US); **G02F 2201/36** (2013.01 - EP US)

Cited by

CN110114714A

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

US 2012014092 A1 20120119; **US 8292447 B2 20121023**; CN 102518980 A 20120627; EP 2420883 A2 20120222; EP 2420883 A3 20120307; JP 2012043793 A 20120301; TW 201229633 A 20120716

DOCDB simple family (application)

US 201113210690 A 20110816; CN 201110242554 A 20110817; EP 11177450 A 20110812; JP 2011178184 A 20110817; TW 100128877 A 20110812